53

THE STORAGE AND SEASONING OF WOODEN POLES.

1. GENERAL.

1.1 Having ensured by a careful inspection, based on a proper application of the specification, that the poles purchased are of first class quality, it is necessary to ensure that they remain in that condition for as long as possible, and to this end proper care must be exercised from the moment delivery is made by the contractor. Even the best timber, complying in all respects with our Specification, will develop blemishes and diseases if it is not properly cared for and large sums of money can be wasted in a timber storage yard if valuable material is permitted to deteriorate through lack of proper attention.

1.2 It cannot be too strongly stressed that the life of a piece of wood is determined by the treatment it receives from the moment the tree is felled, and that all the care and money expended on selection can be wasted by damage which can originate in the storage yard, and which preservative treatment and subsequent careful maintenance can never completely rectify.

2. STORAGE AND SEASONING OF WOODEN POLES.

2.1 General:

2.11 The object of good storage practice is to ensure that timber shall be stacked so that it will dry out evenly without developing checks, splits, warps, or other mechanical weaknesses; and, in addition, is not subjected to influences which will infect the wood with decay organisms or other wood destroying agents.

2.12 Timber when cut green has a high moisture content, the weight of water being very often more than that of the wood, and poles are frequently delivered in this condition. Formerly pole specifications called for the supply of "thoroughly seasoned" timber, which is a very indefinite term, practically incapable of being checked and having a varying significance in different localities. The process of seasoning is the reduction of the moisture content to the appropriate value for the locality in which the timber is to be used, and this is best done in yards properly equipped for handling the material.

Note: The degree of seasoning is measured by the water content of the timber expressed as a percentage of the weight of the perfectly dry wood. For example, if a piece of timber weighs 60 lbs. when received and 40 lbs. after being dried in an oven it would be said to have had a moisture content of 50% in the first place, i.e., 20 lbs. of water and 40 lbs. of wood. When poles are delivered "green" to the Departmental depot it is then necessary to so stack them that the moisture content will be reduced gradually without harmfully affecting the timber. Very quick drying such as occurs in the hot summer months tends to split, check and "warp" green timber.

2.2 Pole Stacking Methods:

2.21 The poles should not be placed on the ground but should be stacked so that the air may circulate freely around each pole and permit even drying. Furthermore, the ends of the poles should be smeared with petroleum jelly for, otherwise, the exposed ends will dry out faster than the rest of the pole and cause splitting.

2.22 Strong supports should be provided to keep the poles at least 12" and preferably 24" above the ground, which should be kept clear of weeds and be suitably drained so that moisture cannot collect under the stack. A good method is to build strong pillars of brick or concrete upon which old iron rails or steel beams are placed as skids to support the poles. Timber supports and skids may be used, but must be thoroughly impregnated with creosote to keep them free of disease and termites. Fig. 1 is a photograph of a typical pole stack.

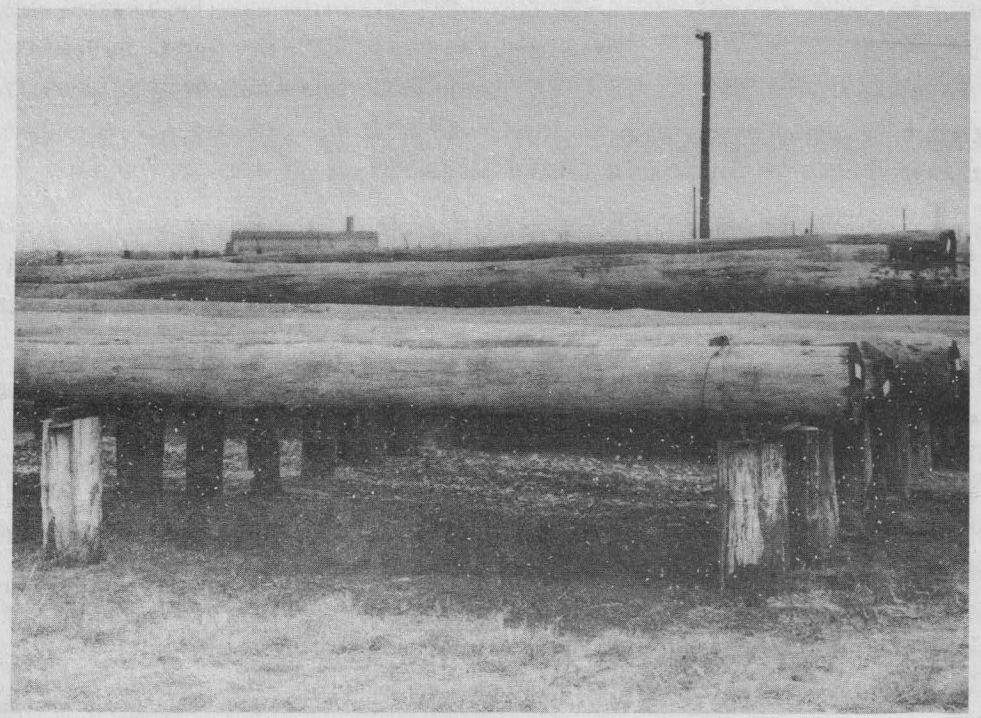

Fig. 1. POLE STACK.

2.23 In bad termite localities extra precautions are necessary to prevent attack of the untreated poles. The ground round each of the supports should be thoroughly puddled with creosote and the use of timber supports avoided if possible. If timber must be used, each support should be fitted with a termite cap or shield of galvanised sheet iron. The outside

of the supports must be kept free of termite communication tubes.

2.24 The poles should be laid side by side with a space between, the layers being separated from each other by suitable spacing strips of steel rails or of wood which has been treated with creosote. In localities where drying conditions are not severe the poles may be used as self-spacers by placing the poles in alternate layers at right angles.

2.25 Preferably poles of different sizes should be kept separate in order that a minimum of disturbance will be necessary when poles are removed.

2.26 Also, where space permits, it is desirable that new deliveries of "green" timber should not be placed on the same stack as timber which has been seasoning for several months and which has a much lower moisture content.

2.27 It is undesirable to store partly decayed recovered poles in a pole yard, but if for any reason it is necessary to do so, they should be stacked as far away as possible from the stacks of new poles, for fungal infection can spread with great rapidity and will soon attack unaffected timber if given a chance. All decayed sapwood. etc., should be removed from all recovered poles when returned to the depot, and the poles should be well treated with creosote by brushing or preferably spraying, taking care that the creosote goes well into any cracks, etc. The decayed matter removed from the pole should be burned or otherwise destroyed.

3. POLE PRESERVATION TREATMENT.

3.1 In addition to the arrangements for storing the poles, the central depots in the main capital cities are equipped with plant for treating the poles with creosote after they have been seasoned as described in PA 9101.

4. HANDLING POLES IN DEPOTS.

4.1 In large pole yards, particularly where open tank treatment plants are in operation, some facility for handling poles on and off lorries and trucks, and into treatment tanks, etc., is required. The most suitable equipment is an overhead gantry and if the pole stacks are correctly laid out all handling can be effected by the gantry.

4.2 In smaller yards simpler arrangements will serve, a derrick or even a pair of shear legs may be sufficient to enable the poles to be handled into treatment tanks. The handling of poles on and off lorries is facilitated without special equipment, if the skids are placed at lorry height.

5. REFERENCE.

PA 9101 - Hot and Cold Open Tank Treatment Process.